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“My name's Jasper and I'm a Sagittarius”: Threat, Social Anxiety and Their Impact on Making a Personal Introduction Videotape

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ABSTRACT - This experimental study investigated how different sources of potential threat, physiological feedback and task structure, interact with social anxiety to influence responses during an impression management stressor. Forty-one socially anxious and 46 less anxious university students were randomly assigned to high- or low-threat conditions before recording personal introduction videotapes. Participants completed self-report measures of appraisal and coping self-statements before and after the task. Results showed that socially anxious individuals (SAIs) in the high-threat condition, rated the task as more threatening, reported fewer positive coping statements, and adopted a more defensive orientation post-task than SAIs in the low-threat condition or less anxious participants. Findings suggest that SAIs are particularly sensitive to internal and external threat cues during social evaluation and that even modest increases in structure and predictability may buffer anxiety in performance settings.

Keywords:

Social anxiety; Threat perception; Self-conscious emotion; Physiological feedback; Task structure; Impression management; Coping

Introduction

From a self-presentation perspective, social anxiety and shyness are related to a protective style of self-presentation characterized by the over-riding motivation to avoid others' disapproval,

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perceived deficits in interpersonal skills and diminished self-worth (e.g., Arkin et al., 1986; Leary & Kowalski, 1995; Schlenker & Leary, 1983). Although theoretically relevant measures have consistent relations with social anxiety and shyness (e.g., Duggan & Brennan, 1994; Jackson et al., 1997; Jackson et al., 2002), by and large, evidence supporting this link is correlational. Moreover, despite the wide variety of stressors employed in experimental studies of social anxiety, some researchers (e.g., Stravynski & Amado, 2001) have argued laboratory stressors often have little correspondence to real life concerns of the socially anxious.

Ideally, experimental stressors for testing self-presentation theories should reflect situations in which impression management is at the forefront. Tasks such as job interviews (e.g., Kirschbaum et al., 1993), and transactions with new acquaintances or dating partners (e.g., Meleshko & Alden, 1993; Stroud et al., 2000; Wenzel et al., 2005) seem to be consonant with these approaches while others (e.g., performing mental arithmetic, coping with random noise, engaging in the Stroop test) may have less ecological validity, albeit these latter stressors 1) generally induce stress responses (Dickerson & Kemeny, 2004), and 2) were not necessarily designed to test self-presentational models.

Since establishing an intimate relationship has long been considered a central developmental task of adulthood (e.g., Smelser & Erikson, 1980), and the capacity to make positive impressions contributes to forming romantic relationships, stressors that tap impression management skills in meeting prospective romantic partners have particular relevance to self-presentational approaches. One potential self-presentation stressor that is ecologically valid and relatively easy to examine in a laboratory is the making of a personal introduction videotape. Although it seems obvious that socially anxious individuals (SAIs) and their less anxious counterparts would have predictably different reactions to this task, there is evidence that situation-specific factors also affect physiological, cognitive, and behavioral responses to stressors, even among the socially anxious (e.g., Turner et al., 1986).

Internal and external sources of potential threat are two plausible influences on responses of SAIs. Clark and Wells (1995) argued that misinterpretations of internal cues are central to problematic social anxiety. This contention is bolstered by preliminary work suggesting SAIs have attentional and interpretive biases about their own arousal that perpetuate anxiety and negative appraisals about social performance. For example, Papageorgiou and Wells (2002) found SAIs informed of a heart rate increase reported more anxiety and negative social performance than SAIs given no such information, even though this feedback did not affect actual heart rate. Other recent studies have found SAIs attend more to internal cues of potential threat (i.e., heart rate information) than external cues (i.e., threatening faces) (Pineles, 2003), and see themselves as more physiologically aroused than controls, again despite an absence of differences in physiological reactivity (Caster, 2001; Mauss, Wilhelm, & Gross, 2004). Taken together, these findings indicate that feedback about arousal and its meaning may be a key internal source of potential threat among SAIs.

External sources of potential threat may also hinder functioning among SAIs. One such source, having direct relevance to self-presentational approaches, is the degree to which a social situation is structured. A growing literature indicates SAIs interpret ambiguous social stimuli more

negatively (e.g., Amir & Foa, 2001; Constans et al., 1999) and perform more poorly than less anxious samples when tasks are less structured, ambiguous, or lack cues to guide behavior (e.g., Norton & Hope, 2001; Wenzel et al., 2005). SAIs also report relatively more difficulty generating scripts to manage socially threatening situations despite having appropriate procedural knowledge (Wenzel & Holt, 2003). Hence, problems accessing and using scripts for ambiguous social situations may contribute to SAIs appraising such encounters as particularly risky. Although more and less socially anxious groups often perform similarly on well-defined, structured tasks (e.g., Norton & Hope, 2001), it is not clear why. Perhaps increased structure circumvents difficulties accessing appropriate social scripts and helps to reduce negative, threat-based patterns of thought that can impede social performance of SAIs.

This study examined the impact of the above sources of threat on responses to making a personal introduction videotape among more and less SAIs. It had three specific purposes. To determine whether this task actually induced stress, changes in subjective anxiety and heart rate were assessed at different points in the experiment. Subjective and physiological arousal often peak in anticipation of stressors (e.g., Baggett et al., 1996; Knight & Borden, 1979), so we hypothesized reported anxiety and heart rate would be higher shortly after learning the nature of the stressor (pre-task) than at baseline or after the task.

In addition, we expected SAIs would display more negative patterns of appraisal and thinking than their less anxious counterparts before and after making their personal introduction. However, given similar levels of performance between SAIs and controls at least on structured speech tasks (e.g., Monti et al., 1984; Norton & Hope, 2001) and to inconsistent findings regarding physiological responding (e.g., Caster, 2001; Mauss et al., 2004) observable behavior (*ah*-ratio, *non-ah*-ratio, global behavior ratings) and heart rate were not expected to differ as a function of social anxiety.

Finally, effects of internal and external sources of potential threat on task-related responses were examined. Based on the sole previous study assessing arousal feedback among more and less SAIs (Papageorgiou & Wells, 2002), we hypothesized SAIs given increased heart rate feedback would report increased threat-based appraisals and negative self-statements as well as decreases in performance appraisal and positive self-statements relative to less anxious participants and SAIs given decreased heart rate feedback. We also hypothesized SAIs exposed to increased external threat (i.e., less structure in preparing their introduction) would report further increases in 1) post-task threat appraisals, 2) protective self-presentation, and 3) negative self-statements and decreases in 1) performance appraisal and 2) positive self-statements compared to other subgroups, after controlling for pre-task responses on each corresponding measure.

Method

Participants

An initial sample of 94 university students made personal introduction videotapes. Data from four women were excluded because English was their second language. Data from one other woman and two men were omitted because, following their presentations, they misidentified the group to which they had been assigned in a manipulation check assessing threat group

membership. The final sample (50 females, 37 males) had a mean age of 24.43 years ($SD = 8.80$). Respondents, none of whom had used a dating-personal introduction service, were predominantly single (87.4%) and Caucasian (93.1%). A two-step cluster analysis based on shyness and fear of negative evaluation scores revealed a two-cluster solution was optimal for the sample. The clusters reflected relatively lower ($n = 46$) and relatively higher ($n = 41$) levels of social anxiety.

Measures

Demographic Data. Demographics assessed included age, gender, marital status, race, year in college, height, and weight.

Shyness Scale (SS; Cheek & Buss, 1981). The nine-item SS assesses anxiety and behavioral inhibition in interpersonal contexts. Items were rated from 1 (*Very Uncharacteristic of Me*) to 5 (*Very Characteristic of Me*). The internal consistency of the SS was $\alpha = .78$ in this research.

Fear of Negative Evaluation Short-Form (FNE-S; Leary, 1983). The 12-item FNE-S assesses concerns about others' disapproval. FNE items were rated between 1 (*Very Uncharacteristic of Me*) and 5 (*Very Characteristic of Me*). Its alpha was $\alpha = .88$ in this study.

Appraisal of Life Events Scale (ALE; Ferguson et al., 1999). The ALE assesses appraisals of threat, challenge, and loss in relation to personal stressors. Its six-item Threat subscale was used in this study. Before and after making their videotapes, participants rated adjectives tapping emotions related to threat (i.e., fearful, threatened, worried, hostile, terrified, frightened) between 0 (*Extreme Disagreement*) and 6 (*Extreme Agreement*). Alphas for the Threat scale were high, $\alpha = .94$ (Pre-task) and $\alpha = .91$ (Post-task).

Performance Appraisals. Two items assessed expected performance (Pre-task) and completed performance (Post-task) on 7-point scales between *Very Poorly* and *Very Well*.

Self-Statements During Public Speaking (SSPS; Hofmann & Dibartolo, 2000). The 10-item SSPS assessed thoughts about public speaking before and after the task. It is comprised of 5-item subscales of positive self-statements (SSPS-P) (e.g., "This is an awkward situation but I can handle everything") and negative self-statements (SSPS-N) (e.g., "I'm a loser" and "I will probably bomb out anyway"). Items were rated between 0 (*Extreme Disagreement*) and 6 (*Extreme Agreement*). Alphas for the SSPS-N were $\alpha = .75$ (Pre-task) and $\alpha = .83$ (Post-task); for the SSPS-P, alphas were $\alpha = .69$ (Pre-task) and $\alpha = .59$ (Post-task).

Social Self-Presentation Style Scale (S-SPSS; Meleshko & Alden, 1993). After presenting, respondents completed this eight-item measure of Acquisitive (four items) and Protective (four items) styles of self-presentation, slightly re-worded to reflect the personal introduction stressor. Items were rated on a 7-point scale anchored between *Extreme Disagreement* and *Extreme Agreement*. Alphas for Protective and Acquisitive scales were $\alpha = .80$ and $\alpha = .61$, respectively. Behavior Ratings. Micro-level and global ratings of behavior were generated from videotapes of presentations. For micro-analyses, videotapes were transcribed verbatim by two undergraduate students blind to hypotheses. Each student transcribed approximately 50% of speeches and checked the other's transcriptions against the actual videotape to ensure accurate transcriptions. Following Mahl's (1956) scheme, speaking time, *ah*-ratio, and *non-ah*-ratio dysfluencies were

calculated for each transcript. Speaking time was calculated by summing total durations of silence of 2 seconds or greater and subtracting this sum from the 120 second task duration. The *ah*-ratio was calculated as the number of filled pauses divided by the total words spoken during the 2-minute speech multiplied by 100. The *non-ah*-ratio was calculated like the *ah*-ratio except that number of other speech errors was numerator.

Global ratings of social skills, shyness, and likeability were provided by two different undergraduates also blind to hypotheses. Each of these was rated on a 7-point scale from 0 (*Very Low*) to 7 (*Very High*) for each 30 second segment of the videotape. Raters were trained via meeting with the principal investigator and thoroughly discussing each construct and its specific indicators, and through analyzing several “prototypical” examples from previous videos judged as high and low in each behavior. Although judges could use specific indicators in making global judgments, final judgments were to be based on overall impressions not merely the sum of various indicators. Disagreements were resolved via discussion between raters and the principal investigator for the first 25 participants and via discussion between raters thereafter. Overall, Kappa coefficients were .82 for social skills, .90 for likeability, and .82 for shyness.

Procedure

Prospective volunteers were recruited from University of Wisconsin-Superior and tested individually by one of two female undergraduate research assistants. After providing consent, participants had a baseline reading of heart rate taken, and completed measures of current anxiety, the SS, FNE-S, and demographics. Next, they listened on headphones to an audio-recording describing the experimental task. Participants were told to imagine they had recently moved to a new city and decided to use a dating-personal introduction service to meet new people. Today they would make a personal introduction videotape. They would have three minutes to prepare and two minutes to present. The resulting video would be rated by four members of the research team. Participants were told the task might cause discomfort for some but were urged to do their best although they could withdraw at any time without loss of extra credit.

Two manipulations were performed to elicit relatively lower and relatively higher levels of task-related threat. Initially, to influence internal sources of threat shortly after the stressor had been introduced, participants were given potentially misleading feedback (e.g., Rohrmann et al., 2002) about their pre-task heart rate: those randomly assigned to a “lower” threat condition were casually told by the experimenter that their heart rate was quite low and they seemed “surprisingly relaxed” compared to others. Those in the “higher” threat condition were casually told their heart rate was quite high and they seemed “surprisingly nervous” compared to others. Following the feedback, pre-task measures of current anxiety, threat appraisal, self-statements about the upcoming task, and anticipated performance were completed. Subsequently, a second manipulation was performed. Just prior to the preparation phase, participants randomly assigned to the lower threat condition were given an outline with a suggested sequence of topics to cover about oneself and a prospective partner. The script provided an optional structure to organize the presentation. In contrast, those in the higher threat condition were given little structure for preparation (i.e., a blank sheet with the instruction, “Please prepare a personal introduction

designed to let potential dating partners know about you”) to increase the ambiguity and unpredictability of the task.

After the preparation time, participants were taken to a partitioned area of the lab designed to look like a small living room. They were seated in a comfortable chair with a small table facing a camcorder about eight feet from them and were told: “Shortly you will begin your presentation. Please try to look into the camera when speaking and not to read. We'd like you to present for the full two minutes. You can pause when needed. I'll tell you when the time has expired.” The experimenter lined up a view of the participant, turned on the camcorder, and stepped out of view. Participants were prompted to begin and timed for two minutes. Any attempts to engage the experimenters were re-directed to the task at hand.

Following expiration of the time limit, a manipulation check was done to evaluate understanding of the pre-performance arousal feedback; participants completed a forced choice item asking them to identify what was said about their heart rate before the presentation (i.e., an indicator of relaxation versus anxiety). Post-task measures of heart rate, anxiety, threat appraisal, self-statements, performance appraisal, and self-presentation style were then completed. Finally, participants were debriefed about research purposes and experimental manipulations and encouraged to share lingering concerns/questions. After debriefing, reactions to participation were assessed. At termination, email addresses were sought from those requesting feedback, and respondents were thanked for their time.

Results

Preliminary Analyses

To assess whether the personal introduction task was actually stress-inducing, mean ratings of current anxiety (0 = *No anxiety at all* to 6 = *Extreme Anxiety*) and heart rate were taken 1) at the beginning of the experiment (Baseline), 2) immediately after learning the nature of the stressor (Pre-Task) and 3) immediately after the task (Post-Task) for all participants. Consistent with similar recent work (e.g., Sheffer et al., 2001), reported anxiety was higher at Pre-Task ($M = 2.30$, $SD = 1.42$) than at Post-Task ($M = 1.69$, $SD = 1.33$). In turn, Post-Task anxiety was higher than anxiety at Baseline ($M = 1.06$, $SD = 1.24$), $F(2, 85) = 48.38$, $p < .001$. For heart rate, findings were also consistent with past evidence (Baggett et al, 1996; Caster, 2001; Mauss et al, 2004); heart rate was higher at Pre-Task ($M = 77.20$, $SD = 12.89$) than at either Baseline ($M = 74.35$, $SD = 13.50$) or Post-Task ($M = 73.03$, $SD = 10.35$), $F(2, 84) = 12.62$, $p < .001$.

Lower threat ($n = 43$) and higher threat ($n = 44$) conditions did not differ for age, $F(1, 85) = 0.80$, $p = .37$, sex, $\chi^2(1) = 1.48$, $p = .22$, marital status, $\chi^2(2) = 3.24$, $p = .20$, race, $\chi^2(3) = 6.10$, $p = .10$, year in college, $F(1, 85) = 0.19$, $p = .66$, body mass index (BMI), $F(1, 84) = 1.73$, $p = .19$, baseline anxiety, $F(1, 85) = 0.01$, $p = .93$, shyness, $F(1, 85) = 0.46$, $p = .50$, or FNE, $F(1, 85) = 0.17$, $p = .68$. More and less socially anxious clusters did not differ for age, $F(1, 85) = 0.01$, $p = .93$, sex, $\chi^2(1) = 0.74$, $p = .39$, marital status, $\chi^2(2) = 0.03$, $p = .98$, race, $\chi^2(3) = 2.33$, $p = .51$, year in college, $F(1, 85) = 1.12$, $p = .19$, or BMI, $F(1, 84) = 0.94$, $p = .33$. However, supporting the integrity of the cluster solution, SAIs scored higher on baseline anxiety, $F(1, 85) = 9.06$, $p = .003$, shyness, $F(1, 85) = 75.84$, $p < .001$, and FNE, $F(1, 85) = 109.44$, $p < .001$.

Table 1: Descriptive statistics and univariate *F* values on self-report measures

Measure	Group				Univariate <i>F</i> values		
	1	2	3	4	Threat	Social anxiety	Threat x Social anxiety
	<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)			
Threat appraisal (pre)	13.05 (9.42)	19.10 (7.35)	12.20 (6.10)	25.11 (5.85)	2.67	35.92***	4.70*
Threat appraisal (post)	8.19 (7.98)	12.86 (7.10)	11.76 (6.37)	24.89 (5.22)	28.40***	36.94***	8.36**
Performance appraisal (pre)	3.71 (1.01)	3.24 (0.89)	3.64 (1.04)	2.89 (0.94)	0.98	8.39**	0.41
Performance appraisal (post)	3.57 (1.36)	3.48 (1.03)	3.08 (1.19)	2.11 (1.24)	12.61***	4.16*	2.81
NSS (pre)	7.67 (4.16)	10.38 (4.54)	8.12 (4.14)	14.37 (5.50)	5.02*	20.45***	3.18
NSS (post)	6.38 (4.62)	10.24 (6.35)	9.48 (5.52)	16.58 (4.76)	16.40***	22.09***	1.93
PSS (pre)	22.29 (3.99)	20.38 (2.82)	22.76 (4.09)	18.05 (4.74)	1.17	14.88***	2.67
PSS (post)	19.33 (3.48)	19.76 (3.63)	20.52 (4.56)	16.53 (5.37)	1.20	3.64	5.60*
Protective self-presentation	5.48 (4.37)	8.52 (3.56)	6.72 (3.49)	13.79 (3.78)	15.61***	37.71***	5.96*
Acquisitive self-presentation	13.14 (2.87)	13.62 (4.48)	12.76 (3.65)	10.74 (3.72)	4.10*	0.92	2.40

Note: 1 = Low Threat-Low Social Anxiety; 2 = Low Threat-High Social Anxiety; 3 = High Threat-Low Social Anxiety; 4 = High Threat-High Social Anxiety. * $p < .05$ ** $p < .01$ *** $p < .001$

Effects on Appraisal

For threat appraisal, a $2 \times 2 \times 2$ (Threat $\times$ Social Anxiety $\times$ Time) repeated measures analysis of variance (ANOVA) indicated the sample appraised the personal introduction to be more threatening at Pre-Task ($M = 17.36$, $SE = 0.79$) than at Post-Task ($M = 14.43$, $SE = 0.73$), $F(1, 84) = 24.42$, $p < .001$. The only other within-subjects effect was for Threat $\times$ Time, $F(1, 82) = 19.31$, $p < .001$. Threat groups did not differ on threat appraisals at Pre-Task, $F(1, 82) = 2.67$, $p = .11$, but less threatened presenters showed a reduction in threat appraisals at Post-Task while more threatened speakers showed little change, $F(1, 82) = 28.40$, $p < .001$. Between-groups effects were also obtained for Threat, Social Anxiety, and their interaction (see Table 1).

Figure 1a: Threat $\times$ social anxiety interaction for pre-task threat appraisal

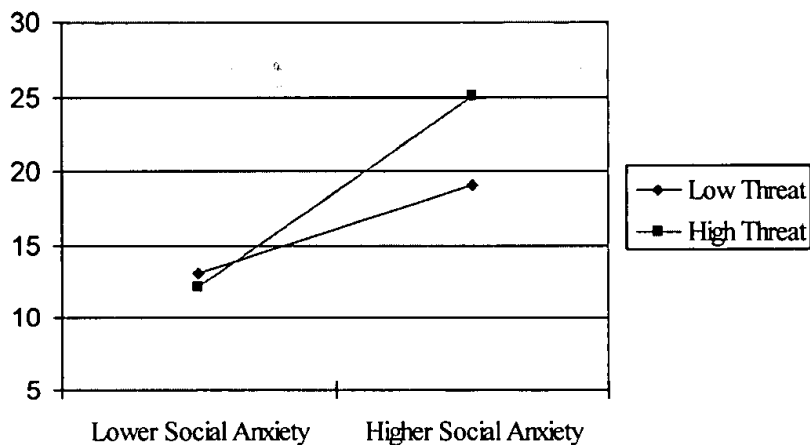


Figure 1 illustrates Threat $\times$ Social Anxiety interactions for threat appraisal. For the pre-task interaction, Bonferroni-adjusted comparisons indicated that SAIs in the higher threat condition judged the upcoming task to be more threatening than participants with low levels of social anxiety. After controlling pre-task threat appraisal, the post-task interaction was marginally significant, ($p = .07$); following the task, SAIs in the high threat condition judged the task to be more threatening than all other subgroups which did not differ from one another.

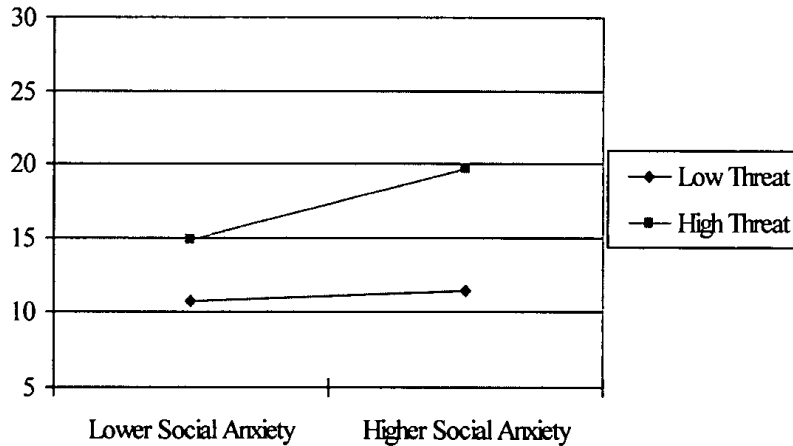
For performance appraisals, Pre-Task ratings of expected performance ($M = 3.34$, $SE = 0.11$) was higher for the entire sample than Post-Task ratings of completed performance ($M = 3.03$, $SE = 0.14$), $F(1, 82) = 8.26$, $p = .005$. The sole within-subjects interaction for Threat $\times$ Time, $F(1, 82) = 19.31$, $p < .001$, indicated groups did not differ on Pre-Task expected performance, $F(1, 82) = 0.98$, $p = .33$, but that lower threat condition subgroups rated Post-Task completed performance more favorably than subgroups in the higher threat condition, $F(1, 82) = 12.61$, $p < .001$. Between-groups effects were found for Threat and Social Anxiety but not their interaction (Table 1).

Effects on Self-Statements

For negative self-statements (NSS), the only within subjects effect was for Threat $\times$ Time, $F(1, 82) = 8.47$, $p = .05$; at Pre-Task, participants in the lower threat condition reported fewer NSS than those in the higher threat condition, a difference that was magnified at Post-Task, controlling

for pre-task NSS (Table 1). Main effects were also observed for Threat and Social Anxiety but not their interaction (Table 1).

Figure 1b: Threat x social anxiety interaction for post-task threat appraisal¹



¹ Interaction effect after controlling for pre-task threat appraisal.

For positive self-statements (PSS), the effect for Time, $F(1, 82) = 18.35, p < .001$ indicated respondents had more PSS at Pre-Task PSS ($M = 20.78, SE = 0.43$) than at Post-Task ($M = 18.99, SE = 0.46$). No other within-subjects effects were observed. PSS did not differ as a function of Threat, $F(1, 82) = 1.11, p = .30$, effects were observed for Social Anxiety, $F(1, 82) = 11.34, p < .001$, and Threat x Social Anxiety, $F(1, 82) = 4.39, p = .04$. At Pre-Task, less socially anxious participants had more PSS than SAIs (Table I), a difference that was marginally significant at Post-Task, $F(1, 82) = 3.64, p = .06$, controlling for Pre-Task PSS. Bonferroni-adjusted comparisons of the Post-Task interaction (Table 1) indicated SAIs in the lower threat condition reported more PSS than SAIs in the higher threat condition after completing the task (Figure 2).

Differences in Self-Presentation

A 2×2 (Threat x Social Anxiety) MANOVA tested for differences in Post-Task ratings of acquisitive and protective self-presentation. Multivariate effects were found for Threat, $F(2, 82) = 8.26, p < .001$, Social Anxiety, $F(2, 82) = 19.57, p < .001$, and their interaction, $F(2, 82) = 3.29, p = .04$. For protective self-presentation, effects were found for Threat, Social Anxiety, and their interaction (Table 1). Bonferroni-adjusted comparisons of the interaction revealed that SAIs in the higher threat condition had a more protective orientation than the other three subgroups which did not differ from one another (Figure 3).

Behavior Ratings

Finally, a 2×2 (Threat x Social Anxiety) MANOVA testing differences in micro-level dysfluencies (speaking time, *ah*-ratio, *non-ah*-ratio) and global behaviors (social skills, shyness, likeability) obtained main effects for Threat, $F(6, 77) = 2.81, p = .02$, and Social Anxiety, $F(6, 77)$

= 2.28, $p < .05$, but not their interaction, $F(6, 77) = 0.59$, $p = .74$. Less threatened participants spoke more ($M = 105.59$ seconds, $SD = 19.60$) than those in the high threat condition ($M = 84.91$ seconds, $SD = 31.19$), $F(1, 82) = 16.39$, $p < .001$. Social skills of lower threat participants ($M = 4.20$, $SD = 0.90$) were rated higher than those of high threat participants ($M = 3.77$, $SD = 0.95$), $F(1, 82) = 4.67$, $p = .05$. There was also a marginally significant difference in observer ratings of shyness among the less threatened ($M = 3.62$, $SD = 1.12$) and more threatened ($M = 4.06$, $SD = 1.13$) subgroups, $F(1, 82) = 3.55$, $p = .06$. For Social Anxiety, one univariate effect was significant: less socially anxious participants spoke longer ($M = 100.71$ seconds, $SD = 24.51$) than SAIs ($M = 88.76$ seconds, $SD = 30.53$), $F(1, 82) = 6.39$, $p = .01$.

Figure 2: Threat x social anxiety interaction for post-task positive self-statements

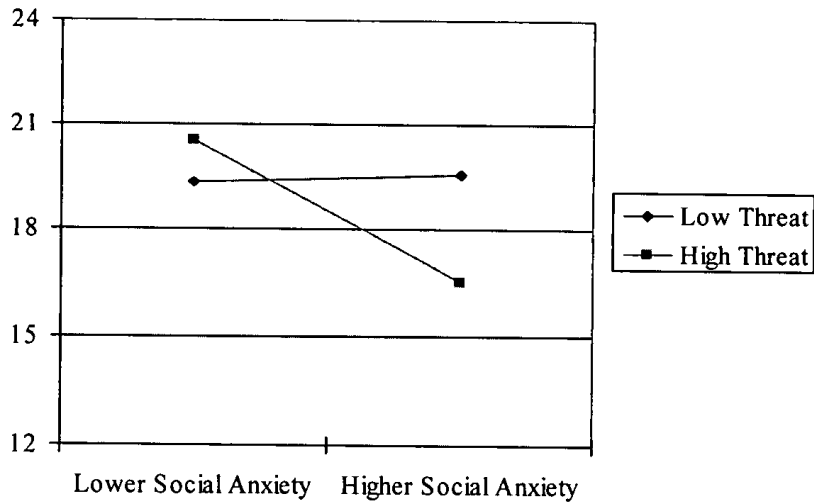
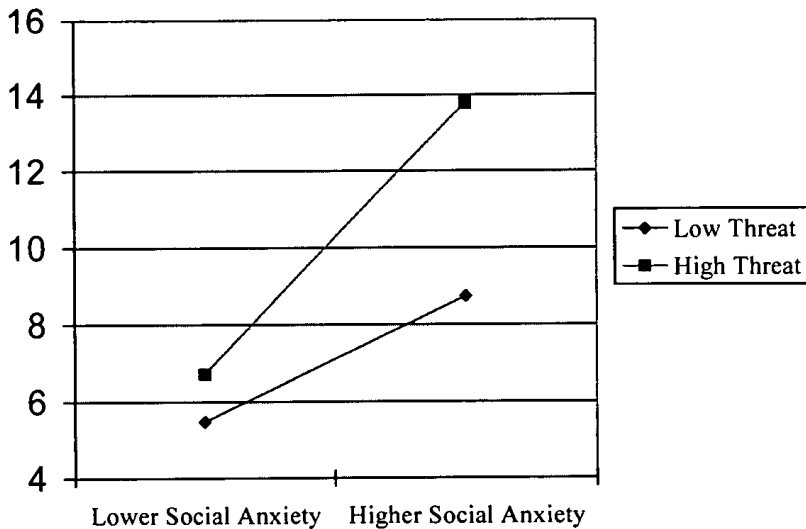


Figure 3: Threat x social anxiety interaction for post-task protective self-presentation



Discussion

This study provides preliminary data about the relative impact of different sources of threat and social anxiety on subjective and objective responses to making a personal introduction videotape. Feedback suggesting an elevated heart rate was related to more negative self-talk in anticipation of making a personal introduction videotape than feedback related to lower heart rate, independent of demographics, actual heart rate, performance appraisals, or positive self-statements. In support of the cognitive view of social anxiety which predicts SAIs interpret interoceptive cues in a negative light compared to their less anxious peers (Clark & Wells, 1995), among those who received feedback suggesting elevated heart rate, SAIs were particularly likely to judge the upcoming task as a threat.

The subsequent manipulation reflecting an external source of threat (i.e., degree of preparatory structure) made additional, unique contributions to judgments about completed performance. Norton and Hope (2001) concluded that social performance of more and less SAIs is often indistinguishable for well-structured experimental tasks. Indeed, observers' global assessments of performance (i.e., social skills, shyness) were partially a function of structure provision and not social anxiety, albeit heart rate feedback could have also influenced behavioral responses (which were rated after both threat manipulations had occurred). After controlling effects of heart rate feedback, reduced structure in preparing one's personal introduction was associated with increased threat appraisal, negative self-talk, and protective self-presentation as well as lower ratings of acquisitive self-presentation after completing the task compared to being provided with increased task structure.

Regarding interactions of task structure and social anxiety, SAIs given less preparatory structure were more likely to view the completed task as a threat and less likely to report positive self-talk about the task relative to SAIs given more structure. The former subgroup also showed a decrease in performance appraisals between pre-task and post-task while the latter subgroup showed an increase, albeit this interaction was not statistically significant. Finally, even though threat conditions did not differ in baseline levels of shyness or fear of negative evaluation, more threatened SAIs scored higher than all other subgroups in protective self-presentation following their personal introduction; in contrast, lower-threat SAIs were indistinguishable from the less anxious subgroups regarding protective self-presentation.

These findings suggest tendencies of SAIs to interpret ambiguous vignettes and word stimuli more negatively than controls (e.g., Amir & Foa, 2001) extend to impression management situations having less structure. However, relatively superficial manipulations to reduce negative interpretations of arousal and decrease task ambiguity may contribute both to adaptive shifts in appraisal and self-talk among the socially anxious and to observers' favorable impressions of their social skills. Together, these findings invite the hypothesis that SAIs perform better in highly structured social-evaluation situations because positive interpretations of subjective arousal and task structure reduce threat appraisals and increase challenge appraisals related to these stressors. In contrast, tendencies of SAIs to view ambiguous or relatively benign social encounters and/or their own performance competencies in a negative light may interfere with desirable functioning, even more than a lack of procedural knowledge or poor social skills.

Strengths of this study included its use of 1) multiple assessment methods and multiple assessment points for some instruments, 2) a stressor having relevance both to self-presentation theory and developmental psychology, and 3) experimental manipulations identifying possible unique effects of distinct sources of threat on responses. However, its main limitations must be acknowledged. First, findings may not generalize to clinical samples of SAIs, hence warranting extensions to these populations. Second, most measures used were reliable and valid, but heart rate was taken on three discrete occasions when continuous assessment would have been optimal. It is also possible that effects of manipulations on positive self-statements and acquisitive self-presentation were attenuated due to fairly modest internal consistencies of these measures. Finally, even if findings suggest positive interpretations of physiological arousal and the imposition of structure benefit non-clinical samples of SAIs in moderately stressful self-presentation situations, extensions are needed in dynamic interaction contexts where interaction partners must influence the course and flow of communication.

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